

REMARKS/ARGUMENTS

Favorable reconsideration of this application in light of the following discussion is respectfully requested.

Claims 1, 2 and 4-9 are pending in this application. Claims 1, 2 and 4-9 are amended by the present amendment. Support for the amended claims can be found in the original specification, claims and drawings.¹ No new matter is presented.

In the Office Action, Claims 1, 2, and 5-7 are rejected under 35 U.S.C. § 103(a) as unpatentable over Segura et al. (U.S. Pat. 6,360,076, herein Segura) in view of Lauterbach et al. (U.S. Pub. 2003/0162512, herein Lauterbach); and Claims 4 and 8-9 are rejected under 35 U.S.C. § 103(a) as unpatentable over Segura in view of Lauterbach and Miyoshi et al. (U.S. Pub. 2002/0123349, herein Miyoshi).

In response to the above noted rejections, Applicants respectfully submit that amended independent Claims 1, 2, 4 and 7-9 recite novel features clearly not taught or rendered obvious by the applied references.

Amended independent Claim 1, for example, recites, in part, a mobile communication system which carries out multicast communication, comprising:

a first radio station configured to carry out the multicast communication with a first mobile station belonging to a specific multicast group;

a second radio station configured to carry out the multicast communication with a second mobile station belonging to the specific multicast group,

wherein each of the first and second mobile stations include a communication quality measurer configured to measure a communication quality of a signal transmitted from each of the first and second radio stations, respectively; and

the first radio station comprises:

a communication quality acquirer configured to acquire the communication quality from the first mobile station belonging to the specific multicast group, ***acquire a communication quality of a signal transmitted from the second radio station to the second mobile station belonging to the***

¹ e.g., specification, at least at p. 9, ll. 15-24.

specific multicast group, and select the lowest communication quality from among the acquired communication qualities;

a transmission method changer configured to determine a number of transmission signal repetitions by the multicast communication, in accordance with the selected lowest communication quality; and

a transmitter configured to transmit the multicast communication to the first mobile station using the determined number of transmission signal repetitions.

Independent Claims 2, 4 and 7-9, while directed to alternative embodiments, are amended to recite similar features. Accordingly, the remarks and arguments presented below are applicable to each of amended independent Claims 1, 2, 4 and 7-9.

As described in an exemplary embodiment at p. 9, ll. 15-24 and Fig. 2 of the specification, for example, a base station 100a is configured to receive communication quality measurements from a mobile station under its control (e.g. mobile station 200a), and mobile stations 200a-200l served by other base stations 100b-100g that are in the specific multicast group. The base station (e.g., the first radio station) then determines a transmission method for the multicast communication based on the signal quality of both the mobile station that it is serving, as well as other mobile stations served by different base stations.

Turning to the applied references, Segura relates to a method and a radio telecommunications network of broadcasting data in an over-the-air multicast to a group of mobile terminals in a single cell.² Segura's method uses statistical data indicating the optimal signal quality that users normally experience when operating in a cell, and, from this data, a minimum transmission quality (TQmin) that a mobile terminal must receive for the type of data being broadcast is determined.

Segura, however, fails to teach or suggest that the base station 10 "acquires a communication quality of a signal transmitted from ***the second radio station to the second mobile station belonging to the specific multicast group***" in order to determine how the broadcast data is transmitted from the cell, as recited in amended independent Claim 1.

² Segura, Abstract.

Lauterbach, one of the applied secondary references, describes a technique for controlling a transmission parameter of broadcast signals, in accordance with a reception quality.³ More particularly, Lauterbach describes that his method includes determining the repetition rate of packets depending on the transfer quality, and broadcasting signals using the determined repetition rate.⁴

Lauterbach, however, similar to Segura, fails to disclose that the transmitter 13 in his system “acquires a communication quality of a signal transmitted from *the second radio station to the second mobile station belonging to the specific multicast group*” in order to determine how data is transmitted from the transmitter, as recited in amended independent Claim 1.

Miyoshi, one of the applied secondary references, describes a base station apparatus 11 for controlling the downlink transmission power value of transmitted signals. More specifically, Miyoshi describes that the base station apparatus 11 calculates the average value of data rate control (DRC) values in each communication terminal apparatus controlled by the base station apparatus.⁵ Miyoshi further describes that the base station 11 determines the transmission power value in accordance with a comparison between the calculated average value of DRC values and a predetermined threshold value.⁶

Miyoshi, however, similar to both Lauterbach and Segura, fails to disclose that the base station 11 in his system “acquires a communication quality of a signal transmitted from *the second radio station to the second mobile station belonging to the specific multicast group*” in order to determine how data is transmitted from the base station, as recited in amended independent Claim 1.

³ Lauterbach, Abstract.

⁴ Id., paragraph [0012].

⁵ Miyoshi, paragraph [0212].

⁶ Id., ST1901 in Fig. 20 and paragraph [0214].

Therefore, Segura, Lauterbach and Miyoshi, neither alone, nor in combination, teach or suggest a radio station used for multicast communication, which ***“acquires a communication quality of a signal transmitted from the second radio station to the second mobile station belonging to the specific multicast group, and selects the lowest communication quality from among the acquired communication qualities”*** and ***“determines a number of transmission signal repetitions by the multicast communication, in accordance with the selected lowest communication quality”***, as recited in amended independent Claim 1.

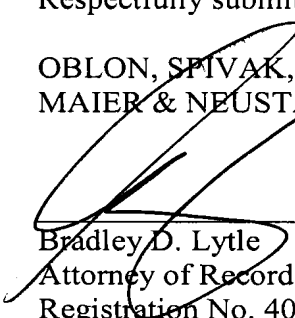
Accordingly, Applicants respectfully request that the rejection of Claim 1 under 35 U.S.C. § 103 be withdrawn. For substantially similar reasons, it is also submitted that amended independent Claims 2, 4 and 7-9 (and any claims that depend therefrom) patentably define over Segura, Lauterbach and Miyoshi.

Consequently, for the reasons discussed in detail above, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. Therefore, a Notice of Allowance is earnestly solicited.

Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

Respectfully submitted,

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